

TRASH BAG DISPENSER

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TRASH BAG DISPENSER10 **FIELD OF INVENTION**

The present invention relates to trash collection and, in particular, to devices bagging and removing trash.

BACKGROUND OF THE INVENTION

15 Typically, trash bags are sold as a roll or stack of a series of connected bags. The bags are divided by perforations to allow for easy separation when a bag is pulled from the roll or stack. Likewise, the bags are all oriented in the same direction such that the opening of each bag precedes the closed end of each bag when pulled from the roll or stack.

20 The trash bags are often sold in a plastic sleeve or cardboard container and are stored at a position remote from the trash collection receptacle, such as in a closet or cabinet. When replacement of a full trash bag is required, the roll or stack of bags must be located and a bag must be separated from the roll or stack and positioned in the receptacle. This process can be burdensome when the full trash bag is leaking or
25 otherwise unstable or when the stored roll or stack of bags cannot be found. Such a burden sometimes leads to the use of receptacles without trash bags causing the receptacles to become unsanitary and trash disposal to require further steps of emptying the receptacle into a trash bag at a later date or into an outdoor collection dumpster.

30 In addition, there may be receptacles of different sizes in use at a site such that different size trash bags are necessary. Storage of such bags together leads to use of improperly-sized bags on receptacles and lead to spills, tears or other problems. In

addition, bags necessary for a specific purpose may be utilized for more general purposes and require that the specific-use bags be replenished more frequently.

Therefore, there is a continuing significant need in the field of trash collection for improvements in trash bag storage.

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In addition, there is a need in the field of trash collection for the facilitation of proper trash bag use.

Furthermore, there is a need in the field of trash collection for a device which encourages use of trash bags in receptacles and promotes the ease of such use.

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OBJECTS OF THE INVENTION

It is an object of the invention to provide a trash bag dispenser for use inside a trash receptacle.

5 Another object of the invention is to provide a trash bag dispenser which provides for convenient storage of extra trash bags within a trash receptacle.

Another object of the invention is to provide a trash bag dispenser which includes a cavity which is attachable to a trash receptacle.

10 Still another object of the invention is to provide a trash bag dispenser for use with a series of connected trash bags which facilitates placement of trash bags in a trash receptacle.

These and other objects of the invention will be apparent from the following descriptions and from the drawings.

BRIEF SUMMARY OF THE INVENTION

In accordance with the present invention, a trash bag dispenser for use with a series of trash bags is provided for facilitating trash disposal. The trash bag dispenser of this invention overcomes certain problems and shortcomings of the prior art,
5 including those noted above, and provides a unique structure satisfying a number of specific needs.

The trash bag dispenser comprises a receiving cavity for receiving the series of trash bags, a cover including a slot for allowing trash bags to be removed from the receiving cavity, and a contact surface preventing separation between the dispenser and
10 the receptacle during removal of trash bags from the cavity. The dispenser is arranged such that a first trash bag can be removed from the receiving cavity through the slot and arranged in the receptacle to hold trash and then be removed from the receptacle causing a second trash bag to be removed from the receiving cavity through the slot to allow arrangement of the second trash bag in the receptacle to hold trash.

15 In certain embodiments, the cavity includes a bottom and four side walls and the bottom includes the contact surface. The contact surface may include an attachment portion which attaches to the receptacle. In such embodiments the attachment portion and receptacle may include a hook and loop fastener arrangement or adhesive.

20 In certain embodiments, the cover is releasably attached to the cavity to allow the series of trash bags to be positioned in the cavity. In other words, the cover may be removed from the cavity to allow a roll or stack of trash bags to be placed in the cavity before the cover is reattached.

In certain embodiments, the receptacle has a bottom end with an inner
25 circumference and the cover has a perimeter which fits the inner circumference such that the cover encloses the bottom end when positioned in the receptacle. Such embodiments allow for protection of the bottom end of the receptacle from spills or other debris.

In certain other embodiments, the receptacle includes a chamber for receiving
30 the cavity. The chamber includes an opening which allows trash bags to be transferred from the receiving cavity to the receptacle. In such embodiments, the cover includes

the contact surface. The receptacle may include the cover and the opening in the chamber may be the slot in the cover such that the receptacle covers the open cavity.

The invention is also described as the combination of a trash receptacle, a trash bag dispenser and a series of trash bags. In such a combination, the dispenser is
5 received by the trash receptacle and includes a cavity for holding the series of trash bags and a cover including a slot for allowing trash bags to be removed from the receiving cavity. The receptacle and dispenser are preferably arranged to prevent separation between the dispenser and the receptacle during removal of trash bags from the cavity such that as a first bag is removed from the receptacle a second bag is
10 transferred from the dispenser to the receptacle. In some embodiments, the dispenser includes a contact surface which prevents separation between the dispenser and the receptacle during removal of trash bags from the cavity. In certain of these embodiments, the contact surface includes an attachment portion which attaches to the receptacle. The attachment portion and receptacle may include a hook and loop
15 fastener arrangement or adhesive.

In certain embodiments, the cover is releasably attached to the cavity to allow the series of trash bags to be positioned in the cavity. The cavity may include a bottom and four side walls. In some embodiments, the receptacle has a bottom end with an inner circumference and the cover has a perimeter which fits the inner circumference
20 such that the cover encloses the bottom end when positioned in the receptacle.

In other embodiments, the receptacle includes a chamber for receiving the cavity. The chamber preferably has an for allowing trash bags to be transferred from the cavity to the receptacle. In certain embodiments, the cover includes a contact surface for preventing separation between the dispenser and the receptacle during
25 removal of trash bags from the cavity.

BRIEF DESCRIPTION OF THE DRAWINGS

The drawings furnished herewith illustrate a preferred construction of the present invention in which the above advantages and features are clearly disclosed as well as others which will be readily understood from the following description of the illustrated embodiment. In the drawings:

FIGURE 1 is a perspective view of a trash bag dispenser in accordance with the invention.

FIGURE 2 is a cross section view of a roll of trash bags positioned within a trash bag dispenser in accordance with the invention.

FIGURE 3 is a cross section view of a stack of trash bags positioned within a trash bag dispenser in accordance with the invention.

FIGURE 4 is a cross section view of a trash bag dispenser installed in a trash receptacle with a trash bag positioned to collect trash in accordance with the invention.

FIGURE 5 is a cross section view of a trash bag dispenser installed in a trash receptacle with a trash bag being removed and another trash bag being positioned for collection of trash in accordance with the invention.

FIGURE 6 is a cross section view of a trash bag dispenser positioned within an alternate trash receptacle in accordance with the invention.

FIGURE 7 is a cross section view of a trash bag dispenser positioned within another alternate trash receptacle in accordance with the invention.

FIGURE 8 is a perspective view of a trash bag dispenser positioned within a trash receptacle, shown in dashed lines, in accordance with the invention.

FIGURE 9 is a perspective view of a trash receptacle with a door for inserting a trash bag dispenser, with dashed lines showing internal features, in accordance with the invention.

FIGURE 10 is a perspective view of a trash receptacle with a door being opened to the internal chamber for receiving the trash bag dispenser.

FIGURE 11 is a perspective view of a trash receptacle with a door being opened to the internal chamber for receiving the trash bag dispenser.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

Referring to FIGURE 1, a trash bag dispenser in accordance with the present invention is generally designated by the reference numeral 10. Trash bag dispenser 10 includes a receiving cavity 20 which is shown as having four side walls 28, though
5 cavity 20 may include a round wall instead. Cover 40 is attached to the open top of receiving cavity 20 and defines perimeter 42. As shown, hinge 44 allows for disengagement of cover 40 and receiving cavity 20 to allow access to receiving cavity 20. Cover 20 includes a slot 22 which is provided to allow removal of a trash bag from receiving cavity 20.

10 Receiving cavity 20 is preferably sized to fit within a trash receptacle without using much of the receptacle internal volume which is intended to be filled with trash. Receiving cavity 20 and cover 40 are preferably made from plastic, though materials such as metal or wood could also be utilized. While receiving cavity 20 and cover 40 are shown connected via hinge 44, cover 40 can be dimensioned to friction fit over
15 receiving cavity 20 as a lid.

FIGURE 2 is a cross section view of a roll of a series of trash bags 30 received within receiving cavity 20. As shown, a free end of a trash bag 32 passes through slot 22 which the series of trash bags 30 remains in receiving cavity 20. Receiving cavity has side walls 28 extended downward to bottom 27. Cover 40 fits over the open top
20 of receiving cavity 20 and keeps the series of trash bags 30 within receiving cavity 20.

FIGURE 3 is a cross section view of a stack of a series of trash bags 30 received within receiving cavity 20. As shown, a free end of a trash bag 32 passes through slot 22 which the series of trash bags 30 remains in receiving cavity 20. Receiving cavity has side walls 28 extended downward to bottom 27. Cover 40 fits
25 over the open top of receiving cavity 20 and keeps the series of trash bags 30 within receiving cavity 20.

FIGURE 4 is a cross section view of a trash bag dispenser 10 within trash receptacle 50 showing a trash bag 32 positioned for use. As shown, trash bag 32 is connected through slot 22 in cover 40 to the series of trash bags 30 contained within
30 receiving cavity 20. Receiving cavity 20 includes sidewalls 28 extending from bottom 27 to an open top. As shown, bottom 27 acts as the contact surface 24 for contact

with trash receptacle 50. Attachment portion 26 is positioned at contact surface 24 and provides for attachment between receiving cavity 20 and trash receptacle 50 to allow a pulling force on the series of trash bags 30 to result in removal of a trash bag 32 from receiving cavity 20, rather than separation between receiving cavity 20 and trash receptacle 50. Attachment portion 26 may be comprised of a hook and loop fastener arrangement or adhesive.

FIGURE 5 is a cross section view of a trash bag dispenser 10 within trash receptacle 50 showing a used trash bag 34 which is filled with trash 36 and is being removed from trash receptacle 50. As shown, the next trash bag 32 for use is pulled from receiving cavity 20 through slot 22 in cover 40 when used trash bag 34 is removed from trash receptacle 50. At the same time, attachment portion 26 at contact surface 24 keeps receiving cavity 20 attached to trash receptacle 50. As shown in earlier figures, receiving cavity 20 has sidewalls 28 extending upward from bottom 27 to an open top which is covered by cover 40. Cover 40 is releasably connected to receiving cavity 20, preferably through friction engagement, such as a snap fit, through a hinge, or through a combination of a hinge and friction engagement.

FIGURE 6 is a cross section view of a receiving cavity 20 positioned within a chamber 56 formed by trash receptacle 50. As shown, chamber 56 is formed by trash receptacle 50 to rest on the ground around receiving cavity 20. Bottom 27 of receiving cavity 20 also rests on the ground. In this embodiment, sidewalls 28 extend upward from bottom 27 to contact surface 24 which contacts the underside of trash receptacle 50. Trash receptacle 50 includes an opening 57 to allow trash bag 32 to pass between receiving cavity 20 and trash receptacle 50. Therefore, the bottom wall of trash receptacle 50 is considered to be the cover for receiving cavity 20 and opening 57 is considered to be the slot in the cover for allowing trash bag 32 to be removed from the series of trash bags 30. As is evident, when trash bag 32 is pulled, receiving cavity 20 and trash receptacle 50 are in contact at contact surface 24 and receiving cavity 20 cannot be moved toward the pulling force, thereby allowing trash bag 32 to be released from receiving cavity 20.

FIGURE 7 is a cross section view of an alternate trash receptacle 50 which includes a chamber allowing insertion of receiving cavity 20 from the side or rear 58 of

trash receptacle 50. As shown, receiving cavity 20 positioned within chamber 56 formed by trash receptacle 50. Chamber 56 is formed by trash receptacle 50 such that receiving cavity 20 rests between a bottom wall 51 and a chamber wall 53. Chamber wall 53 includes opening 57 to allow trash bag 32 to pass between receiving cavity 20 and trash receptacle 50. Therefore, chamber wall 53 of trash receptacle 50 can be considered to be the cover for receiving cavity 20 and opening 57 can be considered to be the slot in the cover for allowing trash bag 32 to be removed from the series of trash bags 30. However, a separate cover 40 is shown attached to receiving cavity 20 and cover 40 includes slot 22 which allows trash bag 32 to pass out of receiving cavity 20 and into trash receptacle 50 through opening 57. In this embodiment, sidewalls 28 extend upward from bottom 27 to cover 40. Cover 40 includes contact surface 24 which contacts the underside of chamber wall 53 of trash receptacle 50. As is evident, when trash bag 32 is pulled, receiving cavity 20 and trash receptacle 50 are in contact at contact surface 24 and receiving cavity 20 cannot be moved toward the pulling force, thereby allowing trash bag 32 to be released from receiving cavity 20. As discussed below, a door 60 may be used to cover the insertion port allowing insertion and removal of dispenser 10 from chamber 56.

FIGURE 8 is a perspective view of trash bag dispenser 10 positioned in a trash receptacle 50 (shown in dashed lines). Trash receptacle 50 includes an inner circumference 54 which defines the internal space of the bottom end 52 of trash receptacle 50. While FIGURE 8 depicts a trash receptacle 50 having a generally circular inner circumference 54, the term "inner circumference" is intended to encompass any shape formed by the interior side of the receptacle walls and is not intended to be limited to circular or round shapes. Cover 40 includes a perimeter 42 which fits circumference 54 such that cover 40 divides trash receptacle 50 into a trash receiving portion 59 and a dispenser receiving portion 55 and receiving cavity 20 is completely separated from the trash receiving portion 59 of trash receptacle 50. As such, debris or trash is prevented from falling to dispenser receiving portion 55 of trash receptacle 50 and into contact with receiving cavity 20.

FIGURE 9 is a perspective view of a trash receptacle 50 having door or flap 60. Door 60 includes handle 61 for gripping and opening door 60. Door 60 opens to

dispenser receiving portion 55 of receptacle 50 and allows a trash bag dispenser to be inserted or removed from receptacle 50 as needed. At other times, door 60 is closed to provide a pleasing aesthetic view of receptacle 50. As is known, door 60 can be designed to open from the top (as in FIGURE 10), from the side (as in FIGURE 11),
5 from the bottom, or in other manners via a hinge 62. Door 60 may also be designed to slide open and closed, which may be preferred design for non-planar receptacle surfaces, e.g., for a circular shaped receptacle.

While the invention has been described with respect to specific embodiments by way of illustration, many modifications and changes will occur to those skilled in the
10 art. It is, therefore, to be understood that the appended claims are intended to cover all such modifications and changes as fall within the true scope and spirit of the invention.